RESEARCH REPORT

Socioeconomic determinants of health related quality of life in childhood and adolescence: results from a European study

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Study objective: The objective of this study was to investigate the impact of two different socioeconomic status (SES) measures on child and adolescent self reported health related quality of life (HRQoL). The European KIDSCREEN project aims at simultaneous developing, testing, and implementing a generic HRQoL instrument.

Design and setting: The pilot version of the questionnaire was applied in school surveys to students from 8 to 18 years of age, as well as to their parents, together with such determinants of health status as two SES indicators, the parental educational status and the number of material goods in the family (FAS, family affluence scale).

Participants: Students from seven European countries: 754 children (39.8%; mean: 9.8 years), and 1142 adolescents (60.2 %; mean: 14.1 years), as well as their respective parents.

Main results: In children, a higher parental educational status was found to have a significant positive impact on the KIDSCREEN dimensions: physical wellbeing, psychological wellbeing, moods and emotions, bullying and perceived financial resources. Increased risk of low HRQoL was detected for adolescents in connection with their physical wellbeing. Family wealth plays a part for children's physical wellbeing, parent relations and home life, and perceived financial resources. For adolescents, family wealth furthermore predicts HRQoL on all KIDSCREEN dimensions.

Conclusions: There is evidence to suggest that exposure to low parental educational status may result in a decreased HRQoL in childhood, whereas reduced access to material (and thereby social) resources may lead to a lower HRQoL especially in adolescence.

There is an enormous body of evidence showing the relation between low socioeconomic status (SES) and health outcomes in adulthood: people with a lower SES experience higher rates of morbidity and mortality than people with a higher SES.[1]

Research shows that a lower SES is associated with more depressive symptoms in young adolescents. This relation can be explained by contextual risk factors as disadvantageous work characteristics, material disadvantages, reduced social support, and risky health behaviour.[2] Not only do current living conditions and SES respectively have an impact on mental health in adulthood, but hardships during childhood may also be important to explain differences in the mental health of adults.[3] Furthermore, childhood living conditions have been found to be relevant predictors for adult health status.[4] Cumulative adversities experienced in childhood are associated with more psychological distress in adulthood.[5] These studies show the relation between SES and health problems in adulthood. Effects on health outcomes and in particular on health related quality of life (HRQoL) during childhood and adolescence have rarely been evaluated.

In general, studies addressing the impact of familial SES and child or adolescent health and HRQoL have found that social class gradients are related to self reported health status and HRQoL. For example, Starfield *et al*[6 7] report an association between familial SES and satisfaction with health, comfort, resilience, and risk avoidance for both children and adolescents. In their review, Bradley and Corwyn[8] describe a significant relation between SES and health, cognitive, and emotional outcomes from early childhood through to adulthood: a higher SES seems to be associated with better health, cognitive, and socioemotional outcomes in children. This is supported by the findings of Najman *et al*,[9] who found children and adolescents from low income families—aged between 5 and 14 years—to have more problems with language and reasoning abilities and to display more externalising behaviour than children and adolescents from families with a higher income. In an Australian study, children from lower socioeconomic backgrounds were reported to have more negative experiences of health and wellness[10] than children from higher socioeconomic backgrounds. More deprived students seem to have poorer self rated health than less deprived students.[11] Higher neighbourhood socioeconomic status was found to be associated with a better quality of life and health outcomes for children.[12–16] Multiple mechanisms linking SES to child wellbeing have been discussed in the literature. Most of these mechanisms involve differences in access to material and social resources or reactions to stress inducing conditions by children as well as their parents.

Besides associations between SES and children's HRQoL, the question has been discussed whether children and adolescents are able to validly report familial SES. With its alternative approach—asking the child and adolescent about material resources the family possesses—the HBSC study has contributed substantially to addressing these difficulties. The FAS questions have been assessed successfully in the HBSC

Abbreviations: SES, socioeconomic status; HRQoL, health related quality of life

follow up study conducted since the assessment in 1997/1998. There are few studies addressing this issue, and those refer to associations of the subjective SES of adolescents with both the parental SES as well as with health outcomes.[17 18] As especially adolescents with deprived material circumstances were found to perform less well on questions about parental education and occupation, home and family affluence scales were found to serve as useful alternatives to asses the material aspect of familial SES.[19 20]

The aim of this study was to assess in detail the impact of two different SES measures on child and adolescent HRQoL. Familial wealth was assessed by the children and adolescents, whereas the parents reported their eduational status themselves. It was hypothesised that the different SES variables would display different relations to the dimensions of HRQoL and that the two different SES indicators would show different effects in children and adolescents.

METHODS

Subjects

The data presented come from the pilot test of the European KIDSCREEN project aimed at developing an HRQoL measure for children and adolescents in seven European countries.[21] The study was conducted between May and July 2002. A school based sample of children and adolescents, aged 8 to 18 years, and their parents was selected in six of the participating countries (Austria, France, Germany, Spain, Switzerland, and the United Kingdom). In the Netherlands a preventive health care system list was used to draw the sample. An attempt was made to include a wide range of SES. Half of the sample for each age group (8–11 years and 12–18 years) was selected from a low SES as determined by the neighbourhood of the school or the type of school (public or state school), and a similar distribution by sex was expected. In accordance with the guidelines of the local ethics committees, all students whose parents signed an informed consent were included in the study. In the case of the Netherlands, children and adolescents were selected stratified by age, sex and postal code.

SES and HRQoL measures

Parental education as an indicator for familial SES was assessed (by the parents) in a country specific manner and assigned to a standard classification of education. The revised International Standard Classification of Education (ISCED), adopted by the General Conference of Unesco in 1997,[22] provides an improved classification framework for compiling and presenting national and international education statistics and indicators. It provides a basis for statistical comparisons between different education systems on a cross national basis (table 1). For group comparison analyses, the categories were collapsed according to low, medium, and high educational status. The parents' questionnaire included an assessment of the educational status of the mother and the father (or legal guardians). Only the higher score of the mother or father's educational status was included in the analyses.

The information supplied by children and adolescents about the familial SES was assessed using the family affluence scale (FAS), which has been validated in the HBSC study[23] as reflecting the material resources of the family by self report. The aim of implementing this index was to facilitate children and adolescents in their description of familial SES indicators reflecting the family's wealth. These indicators include family car ownership, whether children and adolescents have their own bedroom, the number of holidays with the parents per year, as well as family computer ownership (table 1). HBSC data showed that countries ranked in an expected fashion, and that ranking was stable across age groups. These findings confirm that the FAS—reported by young people themselves—is a valid indicator of young people's material circumstances, and supports its use in cross national surveys.[20 24]

To investigate children's and adolescents' HRQoL and wellbeing in the European KIDSCREEN project, a generic standardised screening instrument was created.[21] The KIDSCREEN pilot instrument was developed simultaneously in seven European countries. It includes 52 items, and targets children and adolescents between 8 and 18 years of age. A parent KIDSCREEN questionnaire with 52 items is also available. The following 10 dimensions are covered by both instruments:

1. *Physical wellbeing:* explores complaints of poor health, physical activity, energy and fitness.
2. *Psychological wellbeing:* reveals positive perceptions and emotions.
3. *Moods and emotions:* covers depressive moods, emotions, and stressful feelings.
4. *Peers and social support:* examines social relations with friends and peers.
5. *Parent relations and home life:* explores the quality of interaction with parents or guardians.
6. *Self perception:* includes views about one's physical appearance and the person.

Table 1 Coding of the two SES indicators (parental education and familial wealth)

International Standard Classification of Education (ISCED)	Family affluence scale (FAS)
0 = Pre-primary education	Does your family own a car, van or truck? (0–2 points)
1 = Primary education or first stage of basic education	Do you have your own bedroom for yourself? (0–1 points)
2 = Lower secondary or second stage of basic education	During the past 12 months, how many times did you travel away on holiday with your family? (0–2 points)
3 = Upper secondary education	How many computers does your family own? (0–2 points)
4 = Post-secondary non-tertiary education	
5 = First stage of tertiary education (not leading directly to an advanced research qualification)	
6 = Second stage of tertiary education (leading to an advanced research qualification)	
0–2 = Low educational status	0–3 points = low familial wealth
3–4 = Medium educational status	4–5 points = medium familial wealth
5–6 = High educational status	6–7 points = high familial wealth

Table 2 Study population by age, sex, and SES

	Mean SD	Number	%
Children (8–11 years)		754	39.8
Age	9.75 0.97		
Sex			
Female		387	51.3
Male		367	48.7
Adolescents (12–18 years)		1142	60.2
Age	14.08 1.65		
Sex			
Female		600	52.5
Male		537	47.0
Missing		5	0.5
SES			
Familial wealth (FAS)			
Low		268	14.1
Medium		855	45.2
High		727	38.3
Missing		46	2.4
Parental education			
Low (pre-primary–lower secondary education)		332	17.5
Medium (upper–post-secondary education)		821	43.3
High (first and second stage of tertiary education)		709	37.4
Missing		34	1.8

7. *Autonomy:* examines the autonomy and opportunity to shape one's social and leisure time.
8. *School environment:* explores the perception of the cognitive capacity, learning, and concentration.
9. *Bullying (social acceptance):* investigates the feeling of being rejected and anxiety towards peers.
10. *Financial resources:* reflects whether the child/adolescent feels that he/she has enough financial resources to live like other children/adolescents.

Most items assess the frequency of behaviour or feelings; some assess the intensity of emotions or states. Both item formats use a five point Likert scale from ''never'' to ''always'' on the frequency format and ''not at all'' to ''extremely'' in the intensity format. All items refer to a recall period of one week. The scale scores are summed up item scores, further transformed into values between 0 and 100, whereby higher values show better HRQoL. The items of the instrument fulfil the assumptions of the Rasch model and form a Rasch scale for every dimension with a p value for the Itemfit ranging from 0.156 to 0.909. The internal consistency (Cronbach's α) of the KIDSCREEN scales ranged from 0.77 to 0.88 and confirms the high reliability of the instrument.

Statistical analyses

Univariate analyses were computed comparing the HRQoL means of low, medium, and high familial wealth and of low, medium, and high parental education (table 3). The correlation between the two SES indicators was calculated using Pearson correlation coefficients. Multivariate logistic regression models (computing odds ratios) were used to study the influence of both SES indicators on HRQoL for each dimension. For adjustment purposes, age (the continuous variable) and sex were included in the regression models. The dependent variables were the 10 HRQoL dimensions, each dichotomised into low (33% lowest values) and high HRQoL.

RESULTS

Subjects characteristics

The original sample included 3017 children and adolescents who completed the questionnaire. The parents were instructed to fill in their questionnaires at home (only one parent) and send it back to the study centres. Overall, 62% of the parents completed their questionnaires (n = 1896). These cases provide the complete dataset, and present the sample the following analyses are based on. The sample consists therefore of 754 children (39.8%) with a mean age of 9.8 years, and 1142 adolescents (60.2%) with a mean age of 14.1 years, as well as their respective parents. Of the participating children and adolescents, 52.2% were female, 47.8% male. Table 2 describes the study population by age, sex, and SES.

Differences in HRQoL scores by familial wealth and parental education

Univariate analysis showed statistically significant differences for all of the 10 HRQoL scales between groups with low, medium, and high levels of familial wealth (table 3). Children and adolescents from families with less wealth scored lower on all HRQoL scales than children and adolescents from families with medium wealth, and those again scored lower than those in the wealthiest group.

Comparing the HRQoL means of children and adolescents of parents with a low, medium, and high educational status, significant differences were only found for six HRQoL dimensions. Children and adolescents from households with a higher educational background reported better quality of life than the children of parents with a lower educational status in terms of their physical wellbeing, psychological wellbeing, moods and emotions, school environment, (less) bullying, and their financial resources (table 3).

Correlation of SES indicators

Pearson correlation analyses were conducted to test whether the two SES indicators are closely associated. The correlation is 0.29, showing that the two indicators are linked, but obviously measuring different aspects of SES.

Impact of parental education and familial wealth on HRQoL

To test the impact of both SES variables on the 10 KIDSCREEN HRQoL dimensions, multivariate logistic regression models with low and high HRQoL as outcome variables were computed. The cut off values (means) for low HRQoL were as follows: physical wellbeing: 67; psychological wellbeing: 76; moods and emotions: 72; peers and social support: 66; parent relations and home life: 72; self perception: 71; autonomy: 63; school environment: 56; bullying (social acceptance): 76; financial esources: 60.

Previous findings[25] showed that the impact of SES on HRQoL are different for children and adolescents as well as for women and men.[26] For this reason, separate models were adopted for children (8 to 11 years) and adolescents (12 to 18 years), controlling for sex and age (as a continuous variable) (table 4).

The results show that parental education does predict some facets of quality of life in children, whereas familial wealth predicts all facets of quality of life in adolescents. After controlling for sex and age, low or medium parental education has a significant effect on children's quality of life (lower parental education predicts lower HRQoL) concerning their physical and psychological wellbeing, their moods and emotions, their perception of being bullied, and their financial resources. In adolescents, parental education was a relevant predictor for their physical wellbeing. Children in families with low or medium levels of wealth have a higher risk—compared with the wealthiest group—of a low HRQoL on the dimensions: physical wellbeing, parent relations and home life, and financial resources. Adolescents from less wealthy families were more likely to experience a reduced HRQoL on all dimensions. They are four times more likely to

Table 3 Univariate analyses of HRQoL in children and adolescents: Means (and standard deviations) by parental education and familial wealth

	Parental education low level		Parental education medium level		Parental education high level			
	Mean	SD	Mean	SD	Mean	SD	df	F
Physical wellbeing	70.66	(21.24)	73.89	(20.03)	73.89	(19.51)	2	3.49*
Psychological wellbeing	76.38	(19.01)	79.73	(18.44)	80.41	(17.23)	2	5.84**
Moods and emotions	75.24	(17.74)	77.23	(78.12)	79.35	(17.03)	2	6.22**
Peers and social support	69.53	(21.58)	71.60	(20.90)	72.74	(19.89)	2	2.73
Parent relations and home	78.63	(19.36)	79.21	(18.69)	79.59	(18.94)	2	.29
Self perception	76.47	(19.82)	77.43	(20.05)	78.33	(20.10)	2	1.04
Autonomy	69.13	(22.73)	71.67	(20.81)	71.18	(21.05)	2	1.70
School environment	65.07	(22.02)	65.22	(20.52)	68.65	(19.86)	2	6.21**
Bullying	77.90	(21.46)	82.48	(18.90)	83.48	(16.82)	2	10.32***
Financial resources	63.95	(25.83)	69.56	(25.08)	74.08	(24.44)	2	18.31***
	Familial wealth low level		Familial wealth medium level		Familial wealth high level			
	Mean	SD	Mean	SD	Mean	SD	df	F
Physical wellbeing	70.84	(21.21)	71.73	(20.57)	76.51	(18.77)	2	13.93***
Psychological wellbeing	75.12	(20.26)	78.64	(18.95)	82.05	(15.60)	2	16.30***
Moods and emotions	75.56	(18.49)	77.23	(17.84)	80.00	(16.59)	2	8.15***
Peers an social support	66.69	(22.82)	71.31	(20.85)	73.66	(19.39)	2	11.35***
Parent relations and home	75.16	(21.44)	78.82	(19.08)	81.36	(17.13)	2	11.12***
Self perception	75.05	(21.87)	76.19	(20.82)	80.14	(18.20)	2	10.13***
Autonomy	66.79	(22.67)	70.45	(21.92)	73.40	(19.61)	2	10.23***
School environment	64.25	(22.18)	65.07	(21.18)	68.81	(19.19)	2	8.11***
Bullying	79.12	(18.49)	82.30	(18.87)	82.73	(18.31)	2	3.82*
Financial resources	57.62	(27.18)	69.78	(25.31)	75.39	(22.60)	2	49.26***

***p<0.001; **p<0.01; *p<0.05.

express a reduced physical wellbeing than adolescent in wealthy households.

DISCUSSION

The purpose of this study was to assess the impact of the parental SES indicator education as well as self reported family affluence on subjects' HRQoL in childhood and adolescence.

Socioeconomic gradients in health have been reported and explained for adults.[27–29] The results are consistent, regardless of whether SES is measured by education, occupation, or income. According to current discussions the three indicators are largely independent and income is found to have the strongest effect on mortality.[30] Explanatory models involve diseases, risk factors as well as health behaviour. One of the main focuses lies on explaining the context of SES and health according to a person's experiences with and exposures to psychosocial and environmental risk factors.[31]

In this study, the self reported indicator familial wealth was found to serve as a stronger predictor of quality of life in childhood and especially in adolescence than the parental educational status, which was assessed by the parents. The two indicators were statistically associated[29] but not overlapping to a big extent. Our results show that material indicators (in our study: familial wealth) are better predictors of subjective outcomes like HRQoL than educational indicators.

The evidence for a relation between subjective health variables in children and adolescents and family SES is not consistent. Some studies have found SES differences in psychological wellbeing,[6 7 32–34] while others suggest that, in terms of general measures of psychological wellbeing, adolescence is characterised by little or no SES differentiation.[25] Previous findings show that children from families with a lower SES were more likely to experience lower levels of emotional wellbeing and more behavioural problems.[10 35–37] Bradley and Corwyn[8] found family SES to be associated with health, cognitive, and socioemotional outcomes in children.

Our study shows that the parental educational status has a stronger impact on HRQoL in childhood than in adolescence. Children whose parents are less educated report worse physical and psychological wellbeing and depict more negative moods and emotions. They feel more likely to be bullied and assess their own financial resources as being limited. Our results further suggest that familial wealth—reflecting the material background of the family (FAS)—plays a part for children in terms of their physical wellbeing, parent relations and home life, and their perceived financial resources. For adolescents, low or medium familial wealth is a risk factor for low quality of life in all other dimensions: psychological wellbeing, moods and emotions, peers and social support, parent relations and home life, self perception, autonomy, school environment, bullying (less bullying), and financial resources.

In their review, Bradley and Corwyn[8] discuss multiple mechanisms linking SES to child and adolescent wellbeing. Most of the approaches involve differences in access to material and social resources or reactions to stress inducing conditions by children as well as their parents. Reviewing the content of the assessed FAS scale, our findings confirm this linkage. Our results show that especially those children and adolescents who have better access to other places for social, cultural, educational, or other purposes (availability of a car in the family), who are able to enjoy their privacy (own bedroom), who experience different cultures (family's number of holidays), and who have access to new media (number of computers) report a higher HRQoL.

West[25] states that, with increasing age from childhood to adolescence, the impact of family SES seems to diminish in favour of the increasing role of school related effects, peer relations, and family atmosphere. Comparing children and adolescents, our results show that after controlling for age and sex the SES indicator parental education is to some extent a predictor of quality of life in childhood, but no longer during adolescence. Whereas familial wealth does influence the physical wellbeing, parent relations and home life, and the perceived financial resources in childhood, it determines

Table 4 Odds ratios of parental education and familial wealth for HRQoL of children and adolescents

	Physical wellbeing		Psychological wellbeing		Moods and emotions		Peers and social support		Parent relations and home	
	OR	95%CI	OR	95%CI	OR	95%CI	OR	95%CI	OR	95%CI
Sex										
male*			1		1		1		1	
female (child)	1.28	0.94,1.75	0.99	0.71,1.39	1.25	0.91,1.71	1.19	0.86,1.65	1.09	0.77,1.55
female (adol)	0.94	0.72,1.23	1.47	1.15,1.89	2.23	1.71,2.93	1.00	0.77,1.30	1.21	0.94,1.56
Years of age (child)	0.81	0.70,0.94	1.11	0.95,1.29	0.95	0.82,1.10	0.98	0.84,1.14	1.05	0.90,1.24
(adol)	0.89	0.83,0.97	1.05	0.98,1.13	1.81	1.09,1.28	0.88	0.81,0.95	1.07	0.99,1.15
Parental education										
ISCED 5–6 (high)*	1		1		1		1		1	
ISCED 3–4 (med) (child)	1.30	0.91,1.84	1.06	0.73,1.54	1.94	1.35,2.78	1.07	0.74,1.55	1.22	0.82,1.82
ISCED 3–4 (med) (adol)	1.10	0.82,1.50	0.90	0.68,1.19	0.92	0.68,1.24	1.00	0.75,1.34	0.90	0.68,1.20
ISCED 0–2 (low) (child)	1.81	1.15,2.82	1.67	1.05,2.68	1.98	1.24,3.16	1.31	0.82,2.10	1.25	0.75,2.07
ISCED 0–2 (low) (adol)	1.48	1.01,2.17	1.18	0.82,1.70	1.02	0.69,1.50	1.08	0.74,1.58	0.78	0.53,1.14
Familal wealth										
FAS high*	1		1		1		1		1	
FAS medium (child)	1.30	0.92,1.83	1.23	0.85,1.78	0.85	0.60,1.20	0.99	0.69,1.43	1.65	1.11,2.46
FAS medium (adol)	1.60	1.18,2.16	1.32	1.00,1.74	1.34	1.00,1.81	1.30	0.97,1.74	1.06	0.89,1.41
FAS low (child)	2.57	1.57,4.19	1.43	0.85,2.42	0.78	0.46,1.30	1.62	0.98,2.69	1.82	1.04,3.16
FAS low (adol)	3.96	2.64,5.96	1.98	1.34,2.93	1.78	1.18,2.68	1.75	1.17,2.61	1.83	1.23,2.71
	Self perception		**Autonomy**		**School environment**		**Bullying**		**Financial resources**	
	OR	95%CI	OR	95%CI	OR	95%CI	OR	95%CI	OR	95%CI
Sex										
male*	1		1		1		1		1	
female (child)	1.88	1.27,2.79	1.01	0.73,1.34	0.75	0.50,1.12	0.95	0.71,1.29	1.32	0.96,1.82
female (adol)	4.37	3.34,5.70	1.63	1.25,2.13	0.87	0.68,1.12	0.87	0.66,1.14	0.97	0.74,1.27
Years of age (child)	1.18	0.98,1.41	0.96	0.83,1.11	1.26	1.04,1.51	0.77	0.67,0.88	0.80	0.69,0.93
(adol)	1.19	1.11,1.29	0.91	0.84,0.98	1.02	0.95,1.10	0.96	0.88,1.04	0.89	0.82,0.96
Parental education										
ISCED 5–6 (high)*	1		1		1		1		1	
ISCED 3–4 (med) (child)	1.07	0.69,1.66	1.09	0.75,1.75	1.06	0.67,1.68	1.18	0.84,1.65	1.34	0.94,1.92
ISCED 3–4 (med) (adol)	1.08	0.80,1.46	0.88	0.66,1.19	1.08	0.81,1.43	1.06	0.78,1.45	1.07	0.79,1.46
ISCED 0–2 (low) (child)	1.60	0.93,2.75	1.49	0.94,2.37	1.66	0.94,2.92	1.82	1.17,2.83	1.86	1.19,2.99
ISCED 0–2 (low) (adol)	0.79	0.53,1.17	0.83	0.56,1.22	1.40	0.97,2.02	1.13	0.76,1.70	1.46	0.99,2.15
Familal wealth										
FAS high*	1		1		1		1		1	
FAS medium (child)	1.16	0.76,1.76	1.08	0.75,1.55	1.01	0.65,1.58	1.04	0.75,1.45	1.42	1.00,2.02
FAS medium (adol)	1.24	0.93,1.66	1.39	1.03,1.87	1.31	0.99,1.73	1.11	0.82,1.51	1.59	1.17,2.17
FAS low (child)	0.70	0.35,1.37	1.54	0.93,2.56	0.85	0.44,1.67	1.44	0.88,2.36	2.70	1.63,4.48
FAS low (adol)	1.51	1.00,2.28	1.83	1.21,2.75	1.51	1.02,2.24	1.62	1.07,2.46	3.94	2.60,5.95

*Reference categories.

all HRQoL facets of adolescents. The results of the previous studies we have reported are only comparable to our results to a limited extent as the health indicators measured are heterogeneous. Whereas some of the studies measured health status or health behaviour, others did not apply the self report.

Some limitations of this study deserve comment. Our findings on SES gradients need to be replicated. The selection of SES indicators needs to include variables that describe the socioeconomic family status at a more detailed and precise level (for example, including social and cultural capital) than in this study. For better comparability of the outcomes,

Policy implications

Public health interventions to improve child and adolescents health related quality of life must take different social indicators into account.

What this paper adds

Our study is contributing to the health inequality debate by investigating child/adolescent SES differences in HRQoL. Evidence was found suggesting that exposure to low parental educational status may result in a decreased HRQoL in childhood. Exposure to limited family material resources may lead to a decreased HrQoL to some extent in childhood, to a great extent in adolescence. Moreover, the results show that different aspects of SES do indeed influence HRQoL differently.

systematic analyses on explicit HRQoL dimensions should be conducted in the future.

In conclusion, our study contributes to the health inequality debate by investigating child/adolescent SES differences in HRQoL. Evidence was found suggesting that exposure to low parental educational status may result in a decreased HRQoL in childhood. Exposure to limited family material resources may lead to a decreased HRQoL to some extent in childhood, to a great extent in adolescence. Moreover, the results show that different aspects of SES do indeed influence HRQoL differently.

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